



Image AF / GP 2832

\$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Tetsuya Kawamoto, et al.

Attorney Docket No.: MURTP093

Application No.: 09/543,653

Examiner: K. Easthom

Filed: April 5, 2000

Group: 2832

Title: TEMPERATURE SENSOR

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on December 18, 2003 in an envelope addressed to the Commissioner for Patents, Mail Stop Appeal Brief-Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed:

Deborah Neill

**APPEAL BRIEF TRANSMITTAL
(37 CFR 192)**

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This brief is in furtherance of the Notice of Appeal filed in this case on November 14, 2003. This brief is transmitted in triplicate.

This application is on behalf of

Small Entity

Large Entity

Pursuant to 37 CFR 1.17(f), the fee for filing the Appeal Brief is:

\$165.00 (Small Entity) \$330.00 (Large Entity)

Applicant(s) hereby petition for a _____ extension(s) of time to under 37 CFR 1.136.

If an additional extension of time is required, please consider this a petition therefor.

\$ An extension for _____ months has already been secured and the fee paid therefor of _____ is deducted from the total fee due for the total months of extension now requested.

Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an

extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 500388.

Total Fee Due:

Appeal Brief fee	\$330
Extension Fee (if any)	\$
Total Fee Due	\$330

Enclosed is Check No. 8387 in the amount of \$330.

Charge any additional fees or credit any overpayment to Deposit Account No. 500388, (Order No. MURTP093). Two copies of this transmittal are enclosed.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP



Keiichi Nishimura
Reg. No. 29,093

P.O. Box 778
Berkeley, CA 94704-0778
(510) 843-6200



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Tetsuya Kawamoto, et al.

Attorney Docket No.: MURT P093

Application No.: 09/543,653

Examiner: K. Easthom

Filed: April 5, 2000

Group: 2832

Title: TEMPERATURE SENSOR

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the
United States Postal Service as First Class Mail to: Commissioner for
Patents, Alexandria, Virginia on December 18, 2003.

Signed: Deborah Neill
Deborah Neill

APPELLANTS' BRIEF PURSUANT TO 37 CFR 1.192

Sir:

This brief, transmitted herewith in triplicate, is in furtherance of the Notice of Appeal mailed in the above-referenced application on November 14, 2003. The fees required under 37 C.F.R. 1.17(f) and any other fees required for filing are enclosed.

This brief contains pursuant to 37 C.F.R. 1.192(c) the items under the following headings and in the order set forth below:

- I Real Party in Interest
- II Related Appeals and Interferences
- III Status of Claims
- IV Status of Amendments
- V Summary of Invention
- VI Issues
- VII Grouping of Claims
- VIII Arguments
- IX Appendix of Claims Involved in the Appeal

12/29/2003 AWONDAF1 00000020 09543653

01 FC:1402

330.00 OP

I. Real Party in Interest

The real party in interest of this application and of this appeal is:

Murata Manufacturing Co., Ltd., which is a Japanese corporation doing business at 2-26-10 Tenjin, Nagaokakyo, Kyoto 617-8555, Japan and is the assignee in entire rights to this application.

II. Related Appeals and Interferences

There are no other appeals or interferences known to appellant, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

This application was filed with twenty (20) claims of which four (4) were independent claims (claims 1, 9, 15 and 17).

In a response mailed January 12, 2001 to Requirement for Restriction dated December 15, 2000, Claims 15-20 were withdrawn as non-elected claims.

Claims 1-14 were rejected in an office action dated February 1, 2001. In applicant's response mailed April 26, 2001, claim 7 was cancelled, claim 9 was amended and new claims 22-25 were added.

In a response mailed September 11, 2001 to Requirement for Restriction as between species 1 and species 2, applicant elected species 1 by withdrawing claims 9-14.

Claims 1-6, 8 and 21-25 were rejected in a final office action dated December 6, 2001. In a response mailed February 26, 2002, applicant proposed to amend claims 1 and 21 and cancelled claims 2-5.

In an advisory action dated March 29, 2002, the examiner stated that the proposed amendment raised new issues and would not be entered.

Applicant filed a request for continued examination on April 5, 2002, amending claims 1 and 21 and canceling claims 2-5.

Claims 1, 6, 8, 21-33 were rejected in an office action dated May 15, 2002. In a response filed September 5, 2002, applicant added new claims 26-33.

Claims 1, 6, 8 and 21-33 were rejected in a final office action dated November 1, 2002. In a response mailed January 14, 2003, applicant proposed to amend claims 1, 21 and 24 and to cancel claim 22.

In another advisory action dated February 5, 2003, the examiner stated that the proposed amendment raised new issues and would not be entered.

Applicant filed another request for continued examination on February 20, 2003, amending claims 1, 21 and 24 and canceling claim 22.

Claims 1, 6, 8, 21 and 23-33 were rejected in an office action dated April 2, 2003. In a response filed June 5, 2003, applicant amended claims 1 and 21.

Claims 1, 6, 8, 21 and 23-33 were finally rejected in a final office action dated July 24, 2003. In a response dated September 10, 2003, applicant argued for the application without amending any claim.

In still another advisory action dated October 15, 2003, claims 1, 6, 21 and 23-33 were rejected. The examiner did not say anything about claim 8 but applicant assumed that the examiner's intention was to reject claim 8 also and Notice of Appeal was mailed on November 14, 2003.

The status of the claims as set in said still another final action was and is as follows:

allowed claims	--- none
claims objected to	--- none
cancelled and withdrawn claims	--- 2-5, 7, 9-20 and 22
claims rejected	--- 1, 6, 8, 21 and 23-33

IV. Status of Amendments

Claims 6, 8, 23 and 25-33 have not been amended.

The claims as set out in the Appendix are the claims as currently pending.

V. Summary of Invention

This invention relates to a temperature sensor having a temperature sensing element 12 with electrodes 13 and 14 thereon and lead lines 15 and 16 each with one end attached to corresponding one of the electrodes, as shown in Fig. 3. These lead lines extend more or less parallel to each other and are bent in the same direction proximally to the other ends to form semicircular kinked parts 15a and 15b in a side-by-side relationship such that the sensor can be mounted to a circuit board as shown in Fig. 4. An outer cover material (17a and 17b) covers the temperature sensing element 12 and portions of the lead lines 15 and 16 but the kinked parts 15a and 15b are not covered thereby and are exposed to the exterior.

VI. Issues

In aforementioned final office action dated July 24, 2003 (hereinafter simply "the Final Office Action"), the examiner firstly rejected (in Paragraph 2 of the Official Letter) claims 1, 6, 21, 23-25 and 29-33 under 35 U.S.C. 112 as containing subject matter which was not described in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the

time the application was filed, had possession of the claimed invention because "[T]here is no description for a semicircular exposed kinked part, only one that is "nearly" a semicircle" while "[T]here is no description for a perfect semicircle."

ISSUE 1: IF A CLAIM INCLUDES A LIMITATION THAT A COMPONENT IS SEMICIRCULAR WHILE THE SPECIFICATION DOES NOT SAY THAT THIS COMPONENT SHOULD BE A PERFECT SEMICIRCLE, IS IT PROPER TO REJECT THE CLAIM UNDER 35 U.S.C. 112 AS CONTAINING SUBJECT MATTER WHICH WAS NOT DESCRIBED IN THE SPECIFICATION IN SUCH A WAY AS TO REASONABLY CONVEY TO ONE SKILLED IN THE RELEVANT ART THAT THE INVENTORS, AT THE TIME THE APPLICATION WAS FILED, HAD POSSESSION OF THE CLAIMED INVENTION?

In the Final Office Action, the examiner secondly rejected (in Paragraph 4 of the Official Letter) claims 1, 21, 26 and 29-30 under 35 U.S.C. 102 as being anticipated by McOrlly. McOrlly shows two wires each having a kinked part (32 and 132), regarding which the examiner stated that they are bent in the same direction with respect to each other but that they are attached in different directions.

ISSUE 2: WHEN TWO COMPONENTS THAT ARE BENT IN THE SAME DIRECTION BEFORE BEING INSTALLED TO A DEVICE ARE BENT IN DIFFERENT DIRECTIONS WHEN INSTALLED TO THE DEVICE, DOES THE DEVICE HAVING THESE COMPONENTS BENT IN DIFFERENT DIRECTIONS ANTICIPATE A CLAIM LIMITED AS HAVING TWO COMPONENTS BENT IN THE SAME DIRECTION?

In the Final Office Action, the examiner thirdly rejected (in Paragraph 5 of the Official Letter) claims 21 and 29-30 under 35 U.S.C. 102 as being anticipated by Grimm. The examiner admitted that Grimm discloses a bend which is rather a quarter circle than a semicircle but argued that a quarter circle is nearly a semicircle unless the specification makes it clear that a perfect semicircle was intended because the term "approximately" is one of degree.

ISSUE 3: WHERE A CLAIM LIMITS A BEND TO BE NEARLY OR APPROXIMATELY SEMICIRCULAR AND THE SPECIFICATION DOES NOT SAY THAT IT SHOULD BE A PERFECT SEMICIRCLE, DOES A BEND IN THE FORM OF A QUARTER CIRCLE ANTICIPATE THE CLAIM?

In the Final Office Action, the examiner fourthly rejected (Paragraph 6 of the Official Letter) claims 1, 21, 26 and 28-30 under 35 U.S.C. 102 as being anticipated by Katsuki. Katsuki (in Figs. 1(a) and 1(b)) shows examples of kinked lead lines with the thermistor element placed in between. The examiner argued that they are in a side-by-side relationship because "two buildings can be side by side with shrubs or a swimming pool in-between."

ISSUE 4: DOES KATSUKI DISCLOSE LEAD LINES WITH KINKS THAT MAY BE DESCRIBED AS BEING IN A SIDE-BY-SIDE RELATIONSHIP?

VII. Grouping of Claims

It is Applicant's intention that all claims 1, 6, 8, 21 and 23-33 stand or fall together, as far as the reasons of rejection stated in the Final Office Action are concerned.

VIII. Arguments

ISSUE 1: IF A CLAIM INCLUDES A LIMITATION THAT A COMPONENT IS SEMICIRCULAR WHILE THE SPECIFICATION DOES NOT SAY THAT THIS COMPONENT SHOULD BE A PERFECT SEMICIRCLE, IS IT PROPER TO REJECT THE CLAIM UNDER 35 U.S.C. 112 AS CONTAINING SUBJECT MATTER WHICH WAS NOT DESCRIBED IN THE SPECIFICATION IN SUCH A WAY AS TO REASONABLY CONVEY TO ONE SKILLED IN THE RELEVANT ART THAT THE INVENTORS, AT THE TIME THE APPLICATION WAS FILED, HAD POSSESSION OF THE CLAIMED INVENTION?

It should be admitted, first of all, that nothing under the sun made by a human is perfect.

Accordingly, patent language should be interpreted with this understanding. If lines are said to be parallel in a patent, for example, they are understood to be substantially parallel for the purpose of the described usage of the base invention. A countless number of patents have been allowed and issued in this country including limitations such as something being circular, parallel, horizontal, etc. without saying that it is perfectly circular, perfectly parallel, perfectly horizontal, etc., and there have evidently been enough persons skilled in the relevant arts in this country to practice inventions based on these issued patents. A claim should not be rejected under 35 U.S.C. 112 merely because it did not require some of its components to satisfy a certain condition perfectly.

ISSUE 2: WHEN TWO COMPONENTS THAT ARE BENT IN THE SAME DIRECTION BEFORE BEING INSTALLED TO A DEVICE ARE BENT IN DIFFERENT DIRECTIONS WHEN INSTALLED TO THE DEVICE, DOES THE DEVICE HAVING THESE COMPONENTS BENT IN DIFFERENT DIRECTIONS ANTICIPATE A CLAIM LIMITED AS HAVING TWO COMPONENTS BENT IN THE SAME DIRECTION?

When a claim requires that two components of a subject device should be bent in the same direction, it is requiring that these components be bent in the same direction when they are attached to the device as a finished product, not before they come to be so attached. This conclusion is inevitable because what is being claimed is the device as it is completed with the

required components attached in the required manner, not the same device before it is completely assembled and while its individual components may be still randomly scattered around.

ISSUE 3: WHERE A CLAIM LIMITS A BEND TO BE NEARLY OR APPROXIMATELY SEMICIRCULAR AND THE SPECIFICATION DOES NOT SAY THAT IT SHOULD BE A PERFECT SEMICIRCLE, DOES A BEND IN THE FORM OF A QUARTER CIRCLE ANTICIPATE THE CLAIM?

As discussed above in ISSUE 1, a claim which limits a bend to be merely semicircular without requiring it to be perfectly semicircular should not be rejected for being ambiguous but be interpreted as being at least approximately semicircular. The question of how "approximately semicircular" it can be is not to be answered arbitrarily but depending on the circumstances. The examiner said that it is a matter of degree, but it is not a matter of degree in an unlimited way. For example, if two lines are said to be approximately (or nearly) parallel to each other, the word "approximately" may indeed be interpreted as a matter of degree and lines not perfectly parallel may be considered to be approximately parallel. However, this "degree", when the word "approximately" is said to be a matter of degree, cannot be overly stretched. For example, two lines crossing each other will never be allowed to be described as being approximately parallel. In other words, although it is debatable how close two lines should be to being perfectly parallel in order that they may appropriately be called approximately parallel, that is, although there is a large grey area, mutually crossing lines can definitely not be described as being parallel even approximately and are outside such a grey area. Similarly, an exact boundary between where a bend may or may not be called semicircular may be difficult to draw, but a quarter circle is outside this grey area. In other words, a quarter circle is qualitatively different from a semicircle and hence there is no need to discuss how a given shape is close to being a semicircle in order that it may be properly described as being approximately semicircle (or "how approximate should it be to be called approximate?") It defies common sense to say that a quarter circle is approximately a semicircle even with an excuse that to be a semicircle is only a matter of degree.

It is to be noted that if the kinks on the sensor of this invention were quarter circle, it would not be able to be mounted as shown in Fig. 4. Indeed, Fig. 4 shows how approximately semicircular the kinks of the present invention should be.

ISSUE 4: DOES KATSUKI DISCLOSE LEAD LINES WITH KINKS THAT MAY BE DESCRIBED AS BEING IN A SIDE-BY-SIDE RELATIONSHIP?

Katsuki shows sensors (Figs. 1(a) and 1(b)) each with two lead lines 13 extending away from a thermistor element 11. Each lead line 13 has a kinked part. The portion of each kink that may be said to be approximately semicircular has a diameter of at most 5mm (on the drawing) and the two kinks on the two lead lines are separated by a distance of more than 5cm with the thermistor element 11 of about 3cm in between. The Board is requested to judge whether two kinks thus positioned can be properly said to be in a side-by-side relationship. The examiner's argument that "two buildings can be side by side with shrubs or a swimming pool in-between" is not always correct. If the shrubs are small, the swimming pool is a wading pool for children and the building are skyscrapers towering over the shrubs and the wading pool, the skyscrapers may be said to be in side-by-side relationship although the shrubs and the wading pool are in between. If the swimming pool is an olympic-size swimming poor and the buildings on both sides of it are dingy one-story hovels hugging the ground, a surveyor would not describe them as standing in a side-by-side relationship. Instead, it would rather be a misleading statement to so describe. In other words, the issue is not whether or not something else is in between but the size of the objects relative to the separation that determines whether or not it is proper to describe two objects as being in a side-by-side relationship. In the case of Katsuki, the separation between the two kinked parts is about ten times greater than the size of the kinked parts. It is more like one-story hovels separated by an olympic size swimming pool than skyscrapers having small bushes

in between. An ordinary reader, with Katsuki's drawing in front, would not agree that these kinks are in a side-by-side relationship.

CONCLUSION

ISSUE 1 indicates that the Examiner lacked common sense in rejecting claims for not requiring something to be perfect. It should be concluded that claims should not be rejected for not requiring a component to be perfectly semicircular.

ISSUE 2 indicates that the Examiner lacked knowledge of patent law. Description of a component of a device being claimed must be interpreted as applied when that component appears on the subject device as a finished product, not before the component has been assembled to make up the subject device as a finished product in the claimed form.

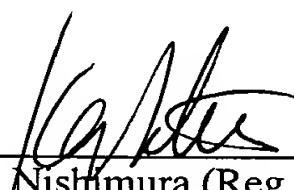
ISSUE 3 indicates that the examiner had an unreasonable idea of what the word "approximately" may be allowed to mean. It should be concluded that a quarter circle is not to be considered even approximately semicircular.

ISSUE 4 indicates that the examiner interpreted the expression "side-by-side" in a manner contrary to what common sense allows.

Rejection of independent claims 1, 21 and 26 as well as dependent claims 6, 8, 23-25 and 27-33 dependent therefrom should be reversed.

Respectfully submitted,

Dated: 12/18/2003


Keiichi Nishimura (Reg. No. 29,093)
BEYER, WEAVER & THOMAS, LLP
2030 Addison Street, Seventh Floor
Berkeley, California 94704

Atty. Docket: MURT P093

Telephone: (510) 843-6200
Facsimile: (510) 843-6203

IX. Appendix of Claims Involved in the Appeal

1. A temperature sensor comprising:
a temperature sensing element having electrodes thereon; and
elongated electrically conductive lead lines each attached to a corresponding one of said electrodes, said lead lines being elastic, said lead lines each having one end attached to a corresponding one of said electrodes and including an externally exposed semicircular kinked part proximal to the other end, said lead lines being bent in a same direction with respect to each other to form said kinked part such that the kinked parts on said lead lines are in a side-by-side relationship.
6. The temperature sensor of claim 1 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.
8. The temperature sensor of claim 1 further comprising an electrically insulating cover which covers said temperature sensing element and said lead lines.
21. A temperature sensor comprising:
a temperature sensing element having electrodes thereon;
elongated electrically conductive lead lines each having one end attached to a corresponding one of said electrodes and a semi-circularly formed externally exposed kinked part proximal to the other end thereof, said lead lines being bent in a same direction with respect to each other to form said kinked part such that the kinked parts on said lines are in a side-by-side relationship; and
an electrically insulating cover which covers said temperature sensing element and portions of said lead lines but leaves the kinked parts exposed.
23. The temperature sensor of claim 21 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS,

Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

24. The temperature sensor of claim 21 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

25. The temperature sensor of claim 21 wherein said temperature sensing element is an NTC thermistor element.

26. A temperature sensor comprising:
a temperature sensing element having electrodes thereon; and
elongated electrically conductive lead lines each attached to a corresponding one of said electrodes, said lead lines being elastic, said lead lines each having one end portion attached to a corresponding one of said electrodes and an externally exposed opposite end portion which includes a semicircular kinked part sandwiched between two mutually colinearly extending portions.

27. The temperature sensor of claim 26 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

28. The temperature sensor of claim 26 further comprising an electrically insulating cover which covers said temperature sensing element and said lead lines.

29. The temperature sensor of claim 21 wherein said kinked part is sandwiched between two mutually colinearly extending portions.

30. The temperature sensor of claim 29 wherein said lead lines are bent in a same direction to form said kinked parts.

31. The temperature sensor of claim 29 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

32. The temperature sensor of claim 30 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

33. The temperature sensor of claim 29 wherein said temperature sensing element is an NTC thermistor element.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Tetsuya Kawamoto, et al.

Attorney Docket No.: MURT P093

Application No.: 09/543,653

Examiner: K. Easthom

Filed: April 5, 2000

Group: 2832

Title: TEMPERATURE SENSOR

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail to: Commissioner for Patents, Alexandria, Virginia on December 18, 2003.

Signed: Deborah Neill
Deborah Neill

APPELLANTS' BRIEF PURSUANT TO 37 CFR 1.192

Sir:

This brief, transmitted herewith in triplicate, is in furtherance of the Notice of Appeal mailed in the above-referenced application on November 14, 2003. The fees required under 37 C.F.R. 1.17(f) and any other fees required for filing are enclosed.

This brief contains pursuant to 37 C.F.R. 1.192(c) the items under the following headings and in the order set forth below:

- I Real Party in Interest
- II Related Appeals and Interferences
- III Status of Claims
- IV Status of Amendments
- V Summary of Invention
- VI Issues
- VII Grouping of Claims
- VIII Arguments
- IX Appendix of Claims Involved in the Appeal

I. Real Party in Interest

The real party in interest of this application and of this appeal is:

Murata Manufacturing Co., Ltd., which is a Japanese corporation doing business at 2-26-10 Tenjin, Nagaokakyo, Kyoto 617-8555, Japan and is the assignee in entire rights to this application.

II. Related Appeals and Interferences

There are no other appeals or interferences known to appellant, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

This application was filed with twenty (20) claims of which four (4) were independent claims (claims 1, 9, 15 and 17).

In a response mailed January 12, 2001 to Requirement for Restriction dated December 15, 2000, Claims 15-20 were withdrawn as non-elected claims.

Claims 1-14 were rejected in an office action dated February 1, 2001. In applicant's response mailed April 26, 2001, claim 7 was cancelled, claim 9 was amended and new claims 22-25 were added.

In a response mailed September 11, 2001 to Requirement for Restriction as between species 1 and species 2, applicant elected species 1 by withdrawing claims 9-14.

Claims 1-6, 8 and 21-25 were rejected in a final office action dated December 6, 2001. In a response mailed February 26, 2002, applicant proposed to amend claims 1 and 21 and cancelled claims 2-5.

In an advisory action dated March 29, 2002, the examiner stated that the proposed amendment raised new issues and would not be entered.

Applicant filed a request for continued examination on April 5, 2002, amending claims 1 and 21 and canceling claims 2-5.

Claims 1, 6, 8, 21-33 were rejected in an office action dated May 15, 2002. In a response filed September 5, 2002, applicant added new claims 26-33.

Claims 1, 6, 8 and 21-33 were rejected in a final office action dated November 1, 2002. In a response mailed January 14, 2003, applicant proposed to amend claims 1, 21 and 24 and to cancel claim 22.

In another advisory action dated February 5, 2003, the examiner stated that the proposed amendment raised new issues and would not be entered.

Applicant filed another request for continued examination on February 20, 2003, amending claims 1, 21 and 24 and canceling claim 22.

Claims 1, 6, 8, 21 and 23-33 were rejected in an office action dated April 2, 2003. In a response filed June 5, 2003, applicant amended claims 1 and 21.

Claims 1, 6, 8, 21 and 23-33 were finally rejected in a final office action dated July 24, 2003. In a response dated September 10, 2003, applicant argued for the application without amending any claim.

In still another advisory action dated October 15, 2003, claims 1, 6, 21 and 23-33 were rejected. The examiner did not say anything about claim 8 but applicant assumed that the examiner's intention was to reject claim 8 also and Notice of Appeal was mailed on November 14, 2003.

The status of the claims as set in said still another final action was and is as follows:

allowed claims	--- none
claims objected to	--- none
cancelled and withdrawn claims	--- 2-5, 7, 9-20 and 22
claims rejected	--- 1, 6, 8, 21 and 23-33

IV. Status of Amendments

Claims 6, 8, 23 and 25-33 have not been amended.

The claims as set out in the Appendix are the claims as currently pending.

V. Summary of Invention

This invention relates to a temperature sensor having a temperature sensing element 12 with electrodes 13 and 14 thereon and lead lines 15 and 16 each with one end attached to corresponding one of the electrodes, as shown in Fig. 3. These lead lines extend more or less parallel to each other and are bent in the same direction proximally to the other ends to form semicircular kinked parts 15a and 15b in a side-by-side relationship such that the sensor can be mounted to a circuit board as shown in Fig. 4. An outer cover material (17a and 17b) covers the temperature sensing element 12 and portions of the lead lines 15 and 16 but the kinked parts 15a and 15b are not covered thereby and are exposed to the exterior.

VI. Issues

In aforementioned final office action dated July 24, 2003 (hereinafter simply "the Final Office Action"), the examiner firstly rejected (in Paragraph 2 of the Official Letter) claims 1, 6, 21, 23-25 and 29-33 under 35 U.S.C. 112 as containing subject matter which was not described in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the

time the application was filed, had possession of the claimed invention because "[T]here is no description for a semicircular exposed kinked part, only one that is "nearly" a semicircle" while "[T]here is no description for a perfect semicircle."

ISSUE 1: IF A CLAIM INCLUDES A LIMITATION THAT A COMPONENT IS SEMICIRCULAR WHILE THE SPECIFICATION DOES NOT SAY THAT THIS COMPONENT SHOULD BE A PERFECT SEMICIRCLE, IS IT PROPER TO REJECT THE CLAIM UNDER 35 U.S.C. 112 AS CONTAINING SUBJECT MATTER WHICH WAS NOT DESCRIBED IN THE SPECIFICATION IN SUCH A WAY AS TO REASONABLY CONVEY TO ONE SKILLED IN THE RELEVANT ART THAT THE INVENTORS, AT THE TIME THE APPLICATION WAS FILED, HAD POSSESSION OF THE CLAIMED INVENTION?

In the Final Office Action, the examiner secondly rejected (in Paragraph 4 of the Official Letter) claims 1, 21, 26 and 29-30 under 35 U.S.C. 102 as being anticipated by McOrlly. McOrlly shows two wires each having a kinked part (32 and 132), regarding which the examiner stated that they are bent in the same direction with respect to each other but that they are attached in different directions.

ISSUE 2: WHEN TWO COMPONENTS THAT ARE BENT IN THE SAME DIRECTION BEFORE BEING INSTALLED TO A DEVICE ARE BENT IN DIFFERENT DIRECTIONS WHEN INSTALLED TO THE DEVICE, DOES THE DEVICE HAVING THESE COMPONENTS BENT IN DIFFERENT DIRECTIONS ANTICIPATE A CLAIM LIMITED AS HAVING TWO COMPONENTS BENT IN THE SAME DIRECTION?

In the Final Office Action, the examiner thirdly rejected (in Paragraph 5 of the Official Letter) claims 21 and 29-30 under 35 U.S.C. 102 as being anticipated by Grimm. The examiner admitted that Grimm discloses a bend which is rather a quarter circle than a semicircle but argued that a quarter circle is nearly a semicircle unless the specification makes it clear that a perfect semicircle was intended because the term "approximately" is one of degree.

ISSUE 3: WHERE A CLAIM LIMITS A BEND TO BE NEARLY OR APPROXIMATELY SEMICIRCULAR AND THE SPECIFICATION DOES NOT SAY THAT IT SHOULD BE A PERFECT SEMICIRCLE, DOES A BEND IN THE FORM OF A QUARTER CIRCLE ANTICIPATE THE CLAIM?

In the Final Office Action, the examiner fourthly rejected (Paragraph 6 of the Official Letter) claims 1, 21, 26 and 28-30 under 35 U.S.C. 102 as being anticipated by Katsuki. Katsuki (in Figs. 1(a) and 1(b)) shows examples of kinked lead lines with the thermistor element placed in between. The examiner argued that they are in a side-by-side relationship because "two buildings can be side by side with shrubs or a swimming pool in-between."

ISSUE 4: DOES KATSUKI DISCLOSE LEAD LINES WITH KINKS THAT MAY BE DESCRIBED AS BEING IN A SIDE-BY-SIDE RELATIONSHIP?

VII. Grouping of Claims

It is Applicant's intention that all claims 1, 6, 8, 21 and 23-33 stand or fall together, as far as the reasons of rejection stated in the Final Office Action are concerned.

VIII. Arguments

ISSUE 1: IF A CLAIM INCLUDES A LIMITATION THAT A COMPONENT IS SEMICIRCULAR WHILE THE SPECIFICATION DOES NOT SAY THAT THIS COMPONENT SHOULD BE A PERFECT SEMICIRCLE, IS IT PROPER TO REJECT THE CLAIM UNDER 35 U.S.C. 112 AS CONTAINING SUBJECT MATTER WHICH WAS NOT DESCRIBED IN THE SPECIFICATION IN SUCH A WAY AS TO REASONABLY CONVEY TO ONE SKILLED IN THE RELEVANT ART THAT THE INVENTORS, AT THE TIME THE APPLICATION WAS FILED, HAD POSSESSION OF THE CLAIMED INVENTION?

It should be admitted, first of all, that nothing under the sun made by a human is perfect. Accordingly, patent language should be interpreted with this understanding. If lines are said to be parallel in a patent, for example, they are understood to be substantially parallel for the purpose of the described usage of the base invention. A countless number of patents have been allowed and issued in this country including limitations such as something being circular, parallel, horizontal, etc. without saying that it is perfectly circular, perfectly parallel, perfectly horizontal, etc., and there have evidently been enough persons skilled in the relevant arts in this country to practice inventions based on these issued patents. A claim should not be rejected under 35 U.S.C. 112 merely because it did not require some of its components to satisfy a certain condition perfectly.

ISSUE 2: WHEN TWO COMPONENTS THAT ARE BENT IN THE SAME DIRECTION BEFORE BEING INSTALLED TO A DEVICE ARE BENT IN DIFFERENT DIRECTIONS WHEN INSTALLED TO THE DEVICE, DOES THE DEVICE HAVING THESE COMPONENTS BENT IN DIFFERENT DIRECTIONS ANTICIPATE A CLAIM LIMITED AS HAVING TWO COMPONENTS BENT IN THE SAME DIRECTION?

When a claim requires that two components of a subject device should be bent in the same direction, it is requiring that these components be bent in the same direction when they are attached to the device as a finished product, not before they come to be so attached. This conclusion is inevitable because what is being claimed is the device as it is completed with the

required components attached in the required manner, not the same device before it is completely assembled and while its individual components may be still randomly scattered around.

ISSUE 3: WHERE A CLAIM LIMITS A BEND TO BE NEARLY OR APPROXIMATELY SEMICIRCULAR AND THE SPECIFICATION DOES NOT SAY THAT IT SHOULD BE A PERFECT SEMICIRCLE, DOES A BEND IN THE FORM OF A QUARTER CIRCLE ANTICIPATE THE CLAIM?

As discussed above in ISSUE 1, a claim which limits a bend to be merely semicircular without requiring it to be perfectly semicircular should not be rejected for being ambiguous but be interpreted as being at least approximately semicircular. The question of how "approximately semicircular" it can be is not to be answered arbitrarily but depending on the circumstances. The examiner said that it is a matter of degree, but it is not a matter of degree in an unlimited way. For example, if two lines are said to be approximately (or nearly) parallel to each other, the word "approximately" may indeed be interpreted as a matter of degree and lines not perfectly parallel may be considered to be approximately parallel. However, this "degree", when the word "approximately" is said to be a matter of degree, cannot be overly stretched. For example, two lines crossing each other will never be allowed to be described as being approximately parallel. In other words, although it is debatable how close two lines should be to being perfectly parallel in order that they may appropriately be called approximately parallel, that is, although there is a large grey area, mutually crossing lines can definitely not be described as being parallel even approximately and are outside such a grey area. Similarly, an exact boundary between where a bend may or may not be called semicircular may be difficult to draw, but a quarter circle is outside this grey area. In other words, a quarter circle is qualitatively different from a semicircle and hence there is no need to discuss how a given shape is close to being a semicircle in order that it may be properly described as being approximately semicircle (or "how approximate should it be to be called approximate?") It defies common sense to say that a quarter circle is approximately a semicircle even with an excuse that to be a semicircle is only a matter of degree.

It is to be noted that if the kinks on the sensor of this invention were quarter circle, it would not be able to be mounted as shown in Fig. 4. Indeed, Fig. 4 shows how approximately semicircular the kinks of the present invention should be.

ISSUE 4: DOES KATSUKI DISCLOSE LEAD LINES WITH KINKS THAT MAY BE DESCRIBED AS BEING IN A SIDE-BY-SIDE RELATIONSHIP?

Katsuki shows sensors (Figs. 1(a) and 1(b)) each with two lead lines 13 extending away from a thermistor element 11. Each lead line 13 has a kinked part. The portion of each kink that may be said to be approximately semicircular has a diameter of at most 5mm (on the drawing) and the two kinks on the two lead lines are separated by a distance of more than 5cm with the thermistor element 11 of about 3cm in between. The Board is requested to judge whether two kinks thus positioned can be properly said to be in a side-by-side relationship. The examiner's argument that "two buildings can be side by side with shrubs or a swimming pool in-between" is not always correct. If the shrubs are small, the swimming pool is a wading pool for children and the building are skyscrapers towering over the shrubs and the wading pool, the skyscrapers may be said to be in side-by-side relationship although the shrubs and the wading pool are in between. If the swimming pool is an olympic-size swimming poor and the buildings on both sides of it are dingy one-story hovels hugging the ground, a surveyor would not describe them as standing in a side-by-side relationship. Instead, it would rather be a misleading statement to so describe. In other words, the issue is not whether or not something else is in between but the size of the objects relative to the separation that determines whether or not it is proper to describe two objects as being in a side-by-side relationship. In the case of Katsuki, the separation between the two kinked parts is about ten times greater than the size of the kinked parts. It is more like one-story hovels separated by an olympic size swimming pool than skyscrapers having small bushes

in between. An ordinary reader, with Katsuki's drawing in front, would not agree that these kinks are in a side-by-side relationship.

CONCLUSION

ISSUE 1 indicates that the Examiner lacked common sense in rejecting claims for not requiring something to be perfect. It should be concluded that claims should not be rejected for not requiring a component to be perfectly semicircular.

ISSUE 2 indicates that the Examiner lacked knowledge of patent law. Description of a component of a device being claimed must be interpreted as applied when that component appears on the subject device as a finished product, not before the component has been assembled to make up the subject device as a finished product in the claimed form.

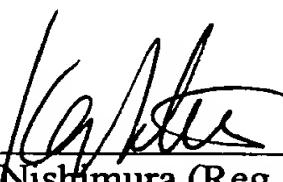
ISSUE 3 indicates that the examiner had an unreasonable idea of what the word "approximately" may be allowed to mean. It should be concluded that a quarter circle is not to be considered even approximately semicircular.

ISSUE 4 indicates that the examiner interpreted the expression "side-by-side" in a manner contrary to what common sense allows.

Rejection of independent claims 1, 21 and 26 as well as dependent claims 6, 8, 23-25 and 27-33 dependent therefrom should be reversed.

Respectfully submitted,

Dated: 12/18/2003



Keiichi Nishimura (Reg. No. 29,093)
BEYER, WEAVER & THOMAS, LLP
2030 Addison Street, Seventh Floor
Berkeley, California 94704

Atty. Docket: MURT P093

Telephone: (510) 843-6200
Facsimile: (510) 843-6203

IX. Appendix of Claims Involved in the Appeal

1. A temperature sensor comprising:
a temperature sensing element having electrodes thereon; and
elongated electrically conductive lead lines each attached to a corresponding one of said electrodes, said lead lines being elastic, said lead lines each having one end attached to a corresponding one of said electrodes and including an externally exposed semicircular kinked part proximal to the other end, said lead lines being bent in a same direction with respect to each other to form said kinked part such that the kinked parts on said lead lines are in a side-by-side relationship.
6. The temperature sensor of claim 1 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.
8. The temperature sensor of claim 1 further comprising an electrically insulating cover which covers said temperature sensing element and said lead lines.
21. A temperature sensor comprising:
a temperature sensing element having electrodes thereon;
elongated electrically conductive lead lines each having one end attached to a corresponding one of said electrodes and a semi-circularly formed externally exposed kinked part proximal to the other end thereof, said lead lines being bent in a same direction with respect to each other to form said kinked part such that the kinked parts on said lines are in a side-by-side relationship; and
an electrically insulating cover which covers said temperature sensing element and portions of said lead lines but leaves the kinked parts exposed.
23. The temperature sensor of claim 21 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS,

Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

24. The temperature sensor of claim 21 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

25. The temperature sensor of claim 21 wherein said temperature sensing element is an NTC thermistor element.

26. A temperature sensor comprising:
a temperature sensing element having electrodes thereon; and
elongated electrically conductive lead lines each attached to a corresponding one of said electrodes, said lead lines being elastic, said lead lines each having one end portion attached to a corresponding one of said electrodes and an externally exposed opposite end portion which includes a semicircular kinked part sandwiched between two mutually colinearly extending portions.

27. The temperature sensor of claim 26 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

28. The temperature sensor of claim 26 further comprising an electrically insulating cover which covers said temperature sensing element and said lead lines.

29. The temperature sensor of claim 21 wherein said kinked part is sandwiched between two mutually colinearly extending portions.

30. The temperature sensor of claim 29 wherein said lead lines are bent in a same direction to form said kinked parts.

31. The temperature sensor of claim 29 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

32. The temperature sensor of claim 30 wherein said conductive lead lines comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated brass.

33. The temperature sensor of claim 29 wherein said temperature sensing element is an NTC thermistor element.